How Industries Lower Energy Costs

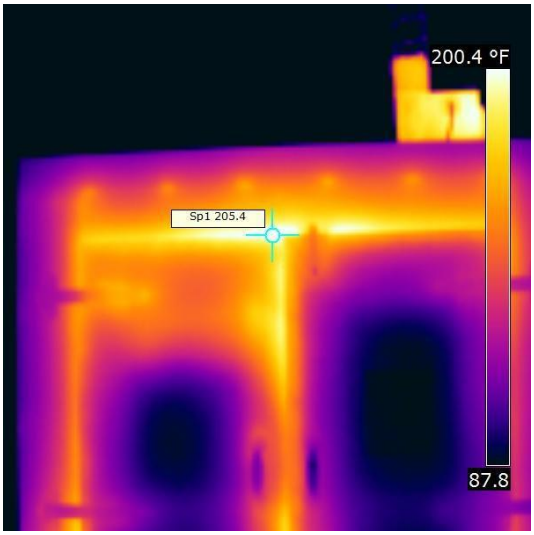
Energy use is a key component of our environmental footprint. At industrial facilities, energy is often times the single largest monthly bill excluding raw materials and salaries. Yet, optimal energy performance is often a low priority item at facilities that have to deal with keeping manufacturing processes humming along. Thus, energy efficiency opportunities are often overlooked, and industrial energy bills can typically be 15 to 20 percent higher than they need to be.

Improving energy performance can reduce operation costs, increase productivity, and reduce waste and carbon emissions. Department of Ecology fosters industrial energy efficiency through its pollution prevention (P2) program. We received an EPA grant to help Washington industries thrive while reducing their energy costs and their environmental footprint.

Many P2 facilities we work with implement energy efficiency projects. Savings can be substantial. Our data shows that half of the small-medium industrial P2 facilities achieved savings higher than $28,000 per year through energy efficiency alone. Many of these projects have involved simple fixes and preventive maintenance. Below are three examples of easy, successful industrial energy efficiency projects:

1. Shut down when not in use

Hidden unused fans, or infrequently used compressed air or vacuum devices that are always on are an easy target for energy efficiency improvements. For instance, a 75 horsepower exhaust fan at a manufacturing facility that was no longer needed, but was still running was costing $9,600 per year to operate. Annual reduction of more than 286,000 pounds of CO_2 resulted once the fan was shut off.



2. Repair thermal leaks

Here is an example of failing insulation in an industrial oven. This facility is currently looking at purchasing a new oven. Their utility may incentivize the project by providing up to 70 percent of the cost of the new oven.

3. Optimize compressed air usage

A large hose rupture like this one on a compressed air line wastes around 11,500 kilowatt hours per year, at 6 cents per kilowatt hour, that is about $700 per year for just one leak.

Our industrial partners engage all of their employees and management to bring about a culture of continuous energy efficiency improvement. We urge facilities to develop a planning, measuring, and implementation cycle structured around their needs, size, and process complexity. We can assist in various steps of the process: screening energy assessments, referrals for further energy audits and potential rebates through utilities or other programs, when available.

For more information, contact your regional pollution prevention contact or the Technical Resources for Engineering Efficiency (TREE) team (http://www.ecy.wa.gov/tree/index.html).